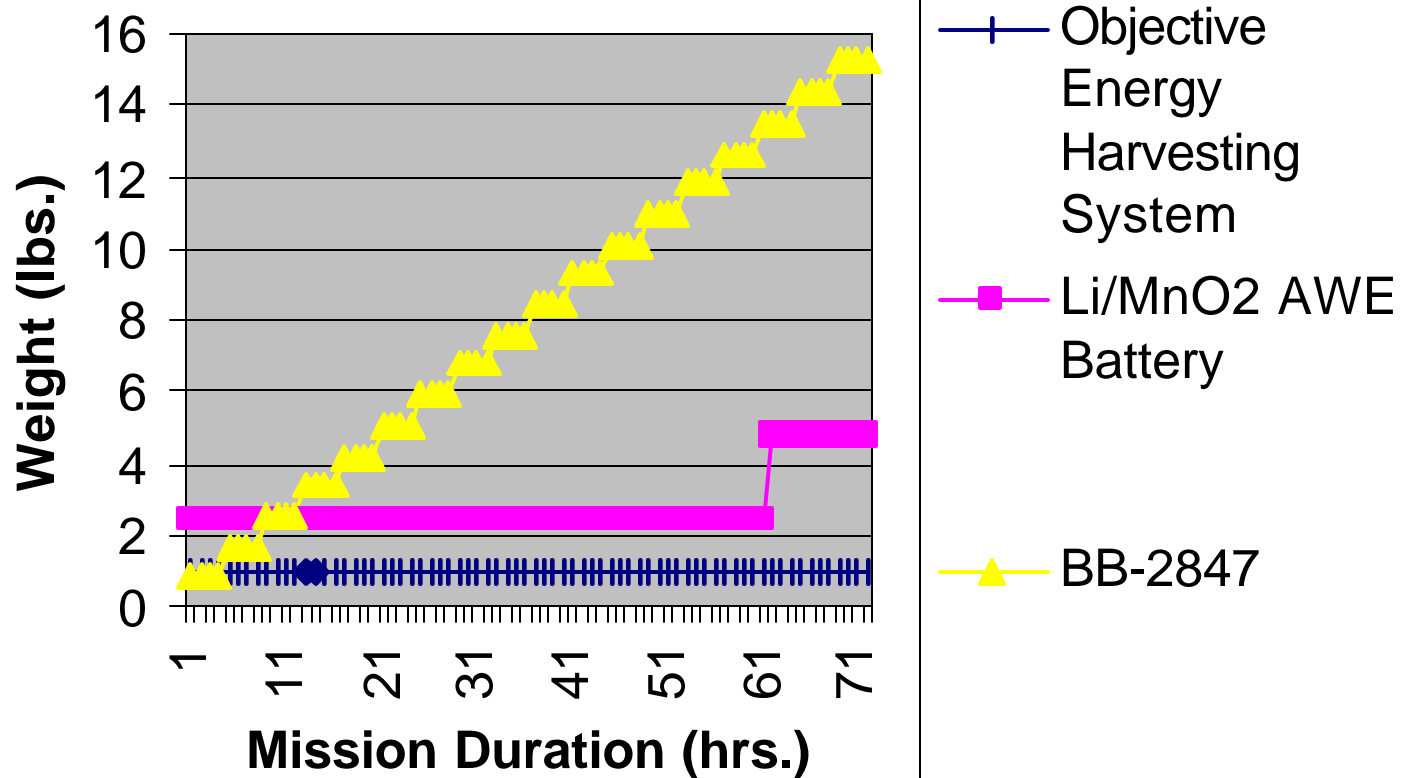




# CECOM ENERGY HARVESTING



## Weight Comparison for 5W Load

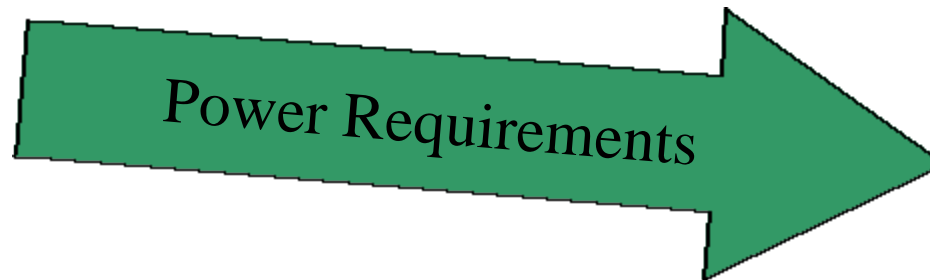




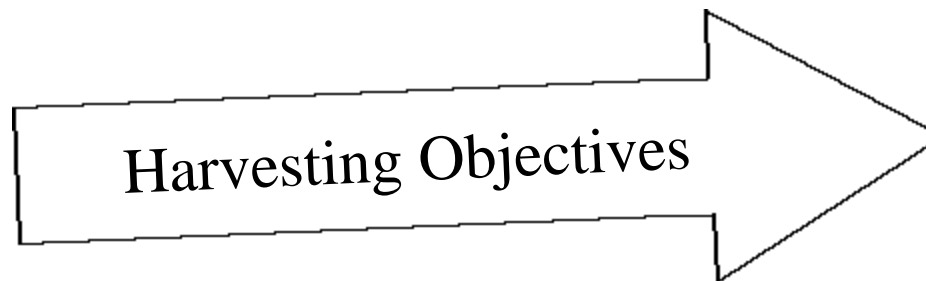
# CECOM ENERGY HARVESTING

## Why Harvest Energy?

Power

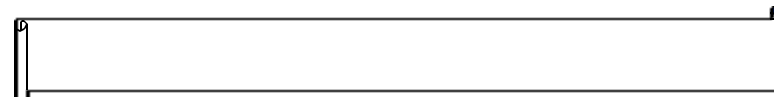


- More Efficient Electronics
- Power Management



- Human Research
- Materials Research

Time (years)





# CECOM ENERGY HARVESTING

## Schedule of Activities

JOAN 806	FY 00				FY 01				FY 02			
KINETICS	\$231K (\$56K/\$175K)				\$300K (\$50K/\$250K before tax)				\$382K (\$72K/\$310K before tax)			
(ENERGY HARVESTING)	1	2	3	4	1	2	3	4	1	2	3	4
<b>BIOMEDICAL RESEARCH</b>												
(USARIEM)												
<b>ENERGY HARVESTING BAA</b>												
- BAA Solicitation	^											
- Contract Award for Feasibility Prototype (14 Jan 00)		^(\$175K)				^(\$250K)				^(\$215K)		
- Feasibility Study												
- Conceptual Designs												
- Fabricate Breadboards												
- Lab Evaluation												
- User Evaluation												
- Potential Transition to PM Soldier												^
<b>DUS&amp;T BAA</b>												
- DUS&T Solicitation		^										
- Contract Award for Dual-Use Energy Harv. Device						^(\$285K)				^(\$95K)		
- Development of Novel Dual-Use Energy Harv. Device												
<b>ENERGY HARVESTING SYSTEM EVALUATION</b>												
STO Contract Funding												
STO In-House Funding												
DUS&T Funding												



# CECOM ENERGY HARVESTING

## On-Going Related Activities



- **ISWC**



- **IBM Systems Journal**  
*“Human-Powered Wearable Computing”*
- **Army Research Lab**  
*Wearable Sensors*
- **Prior Belvoir Studies**
- **Baygen/Freeplay**  
*Heel-strike and coiled spring systems*



- **Space Power Institute / ARO**  
(Prospector Series)

*“Human Powered Systems Technologies”, A. Ballato*

- **PC Magazine, Oct 99**  
*Compaq “Magnetic Keyboard” patent application*

- **MIT**  
*Wearable Computing*



-   
*Energy Harvesting Program*

- **CECOM Energy Harvesting for the Soldier**



**CECOM Bottom Line: THE SOLDIER**